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## EVIDENCE FOR ACTION

## Scorecards and social accountability for improved maternal and newborn health services: A pilot in the Ashanti and Volta regions of Ghana



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## ABSTRACT

**Background:** With the limited availability of quality emergency obstetric and newborn care (EmONC) in Ghana, and a lack of dialogue on the issue at district level, the Evidence for Action (E4A) program (2011–2015) initiated a pilot intervention using a social accountability approach in two regions of Ghana. **Objective:** Using scorecards to assess and improve maternal and newborn health services, the intervention study evaluated the effectiveness of engaging multiple, health and non-health sector stakeholders at district level to improve the enabling environment for quality EmONC. **Methods:** The quantitative study component comprised two rounds of assessments in 37 health facilities. The qualitative component is based on an independent prospective policy study. **Results:** Results show a marked growth in a culture of accountability, with heightened levels of community participation, transparency, and improved clarity of lines of accountability among decision-makers. The breadth and type of quality of care improvements were dependent on the strength of community and government engagement in the process, especially in regard to more complex systemic changes. **Conclusion:** Engaging a broad network of stakeholders to support MNH services has great potential if implemented in ways that are context-appropriate and that build around full collaboration with government and civil society stakeholders.

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## 1. Introduction

Although maternal and newborn mortality has decreased in Ghana in the last 20 years, generally progress has been slow [1]. Limited availability of quality emergency obstetric and newborn care (EmONC) is a major contributing factor. A 2011 EmONC national survey highlighted major gaps in the delivery of maternal and newborn health (MNH) care. Only 89 (8%) out of 1159 health facilities with a maternity ward had the capacity to provide the full complement of basic or comprehensive EmONC [2,3]. Three subsequent studies in Ghana also showed low quality of maternal and newborn care [4–6].

Based on an analysis of the challenges and opportunities in the MNH sector, the Evidence for Action (E4A) program in Ghana initiated a pilot intervention to improve the quality of maternal and newborn health

care in its project districts. In Ashanti and Volta regions of Ghana, 17% and 15% of the facilities respectively fully met the EmONC status requirements in 2011 [3]—status was based on the performance of signal functions in the last 12 months. E4A Ghana (2012–2015) was a UK Department for International Development-funded program using evidence and advocacy to strengthen accountability for MNH. The intervention is based on a social accountability premise (see Martin Hilber et al. [7]) in line with approaches promoted by the government of Ghana.

The question underlying the E4A intervention was whether engaging stakeholders from different sectors, including community representatives, to assess and support local health facilities could create shared ownership and, through that shared ownership, improved accountability for MNH services that might, in turn, lead to improvements in quality of care. Potentially, involvement of community representatives can stimulate improvements in quality of services, but the effectiveness of community participation has varied greatly from one context to another and requires further study [8–10]. In general, there is a gap in published empirical data concerning community accountability

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initiatives in the health sector in general [10] and in MNH in particular (see Martin Hilber et al. [7]).

In Ghana, the 1992 Constitution of Ghana and other national legislation including the 2003 Local Government Service Act 656, the 1996 Ghana Health Service And Teaching Hospitals Act 525; and the 1994 National Development Planning (System) Act 480, provide the foundations for multistakeholder engagement and community participation within government processes.

However, translation of this inclusive strategy into Ghana's decentralized health system and MNH sector showed significant gaps. Quality assurance processes of facilities and MNH services are overseen by the Ghana Health Service (GHS) [11]. Hospitals have their own quality assurance teams, and health centers and Community Health and Planning Service (CHPS) compounds are also overseen by District Health Directorates through routine quarterly monitoring and supervisions. Clients and/or community members and other stakeholders such as municipal or district assemblies and community-based organizations (CBOs) have limited roles in monitoring and improving quality of care in health facilities [12], although the GHS Act 525 provides for their representation on District Health Management Teams (DHMT) (GHS Act 525 1996).

### 1.1. Research aim

The present paper examines qualitative and quantitative evidence from the social accountability intervention used by E4A to assess the effectiveness of engaging multiple health and non-health sector stakeholders to improve MNH services at facility level. It also identifies some limitations to this strategy and makes recommendations for future interventions of a similar nature.

### 1.2. Social accountability initiative overview

The initiative was designed to strengthen partnerships between clients, providers, and the community at large for improved MNH care through a social accountability process using scorecards. Before carrying out scorecard assessments, health providers and community-based NGOs were trained on MNH rights and client care to ensure a common understanding of entitlements in MNH service delivery. Although this intervention did not focus on clinical skills building for quality EmONC, the aim was to improve the enabling environment for EmONC and engage the community at large in this endeavor.

Between July 2014 and July 2015, the scorecard process was undertaken twice in 37 health facilities located in eight districts of the Ashanti and Volta Regions. The scorecard process involved assessing the enabling environment for health facilities to provide EmONC services, including clients' perspectives and satisfaction with MNH services received on the day of assessment. The results were later used to facilitate stakeholder meetings at the district/municipal, health facility, and community level (catchment area of facilities). The aim of these meetings was to promote and support a culture of partnership but also of accountability—both from the demand side (community participation) and from the supply side (increased engagement of decision makers, improved lines of accountability).

A nine member assessment team was formed in each of the participating districts/municipalities, including four members of the municipal/district health management team (M/DHMTs—an administrative body); a planning officer of the municipal/district assembly (M/DA—a political body), staff from a community-based organization (CBO) active in the E4A program; and three MNH council leaders. The rationale behind creating multistakeholder assessment teams was to provide opportunities for duty bearers (from both administrative and political bodies) and rights holders to work collectively to identify and address gaps across sectors.

Meetings organized at the district/municipal level brought together heads of all assessed health facilities, municipal district/assembly representatives, District Health Directorates, Regional Health Directorates,

Ghana Health Service (national level), the National Health Insurance Authority (in some cases), community leaders, media, and CBOs. At the facility and community level, additional and follow-up interface meetings were organized that involved health facility staff and community members. Results from scorecards were used during the meetings to identify gaps and propose solutions for each facility, but also to promote understanding between clients, providers, and communities, for example around the skills and resource constraints under which facility staff worked. Scoring was shown by facility and by benchmarking facilities within districts to support transparency and promote some competition. At each round, facilities drew action plans with clear allocation of responsibilities and timelines for each solution proposed. Scores, gaps, and action plans were made public, including via the media, to foster transparency and accountability for improved MNH quality of care.

## 2. Materials and methods

### 2.1. Study settings

The intervention was piloted in 37 health facilities of eight districts of the Ashanti and Volta regions. The districts covered a range of different settings such as Asante Akim in the Ashanti region, which has a large population at around 140 000 in 2010 with 57% living in urban areas, to South Dayi in the Volta region with 47 000 people, only 39% of whom are considered urban [13].

Ten of the 37 facilities are hospitals designated to provide comprehensive EmONC services (CEmONC; including the ability to provide cesarean delivery and blood transfusion). The remaining 27 basic EmONC (BEmONC) facilities were comprised of 18 health centers, seven clinics, one polyclinic, and one CHPS compound.

### 2.2. Study design

The study had two components. The quantitative component comprised two rounds of facility assessments. The qualitative component prospectively assessed the impact of changes in policy, attitudes, and/or practices.

### 2.3. Facility assessments

The E4A team in collaboration with GHS developed the facility assessment questionnaires based on key domains of quality of MNH care (Box 1). The full overview of scorecard questions under each

#### Box 1

Themes covered in the assessment tools.

##### *Assessment Tool 1: Facility Infrastructure and Equipment – MNH services*

Domain 1: Accessibility and access to information  
Domain 2: Staffing  
Domain 3: Infrastructure (including electricity)  
Domain 4: Water, sanitation, and hygiene  
Domain 5: Essential equipment  
Domain 6: Essential drugs

##### *Assessment Tool 2 – Client Perspectives – MNH services*

Domain 1: Accessibility of facility  
Domain 2: Access to information  
Domain 3a: Provider–client interaction - prenatal care  
Domain 3b: Provider–client interaction - delivery  
Domain 3c: Provider–client interaction - postnatal care

domain can be found in [Supplementary Material S1](#). The questionnaire was piloted in both regions prior to the first assessments, and thereafter improved after each assessment through feedback from participating stakeholders. Training of the assessment teams was carried out in each region with representatives from each stakeholder group: community representatives, NGOs, health facility staff, and DHMTs. Data were collected using electronic devices (tablets) and were based on observations of infrastructure, equipment and available drugs, and through exit interviews with maternity clients. At each stage, results were agreed upon through group consensus. Data inconsistencies were resolved during analysis by revisiting the facility in question, and by clarifications achieved through open discussion among the stakeholder group, including GHS representatives, at district level meetings. The participatory approach supported data transparency and validation of this data through public consensus.

#### 2.4. Prospective policy study

An independent prospective policy study carried out by external researchers followed the E4A program with the aim of understanding the resulting changes at district and regional level. Data collection focused on process tracing to assess whether and how the scorecard process contributed to changes in policies or to changes in attitudes or practices among key stakeholders. This data collection included regular meeting observations and analysis of documents, as well as repeat interviews with a broad base of MNH actors, including local government staff, district assembly members, health facility managers, community leaders, and organizations [14].

#### 2.5. Data analysis

Qualitative data obtained through interviews, observations, and documents were reviewed using a combination of deductive and inductive content analysis to identify categories across data from which inferences could be made in relation to research questions [15].

Quantitative data analysis was carried out by the E4A team and results were translated into scorecards that enable an easy understanding of a facility's EmONC readiness. Domain scores were calculated as the sum of scores for each individual question, relevant to that domain, where positive answers were allocated marks and negative answers scored zero. These were then translated to a percentage score for each domain by dividing by the highest possible score available in that domain (representing the best possible quality of care taking into account the expected function of each facility). Overall facility scores were computed as the average of the scores for each domain (domains 1–6 for infrastructure and 7–9 for client perspectives).

Results were translated into scorecards ([Fig. 1](#)) to enable a quick visual way of understanding the status of a facility's EmONC enabling environment. The performance rating is based on the distribution of scores across all 37 facilities in the study so that the performance is measured relative to the other facilities performance in the same assessment rather than against a fixed benchmark. All analysis was performed using Microsoft Excel and Stata.

The data were intended for use at the local level through the scorecards, as described above, rather than for monitoring outcomes at the aggregate level. Additional analysis showed areas of change over time in the dataset as a whole. It should be noted however that the facilities in this study are not a random sample and are not representative of any wider population to which the results can be applied.

Logistic regressions were performed on the client perspectives data using the question of interest as outcome variable and round of data collection as the only explanatory variable. By taking the first round as a reference group, the odds of the respondents answering “yes” to the question in the second round were then calculated. Clustering of observations by health facility was taken into account by defining health

facility as random effect in the models. The results are reported as odds ratios.

### 3. Results

The two rounds of facility assessments and meetings in eight districts of the Ashanti and Volta regions showed that engaging a variety of stakeholders, including community representatives, to support local health facilities created shared ownership of both problems and solutions that was beneficial for improving quality of care in MNH [13]. The scorecard process led to a wide range of results both related to the social accountability process itself, as well as changes in quality of care at facility level that are presented in this section. Infrastructure and other material changes were attained by either an official reallocation of district or facility funds or through community advocacy and fundraising [15]. As presented in [Figs. 2 and 3](#), change was more visible between round 1 and 2 for “infrastructure and equipment” than for client perspectives on quality of care—mainly because scores were already high at baseline.

The overall score for the “facility infrastructure and equipment” assessment improved between rounds one and two in 30 of the 37 facilities, while it declined in four of the facilities. There was no change recorded in the remaining three facilities. The majority of the improvement was seen in improving the accessibility of the maternity (domain 1), the availability of essential drugs and equipment (domain 5 and 6) followed by infrastructure improvements (domain 3). The slowest improvements were seen under staffing (domain 2) and water and sanitation (domain 4).

The overall score for the “client perspectives” assessment improved between rounds one and two in 21 of the 37 facilities, while it declined in 14 facilities. There was no change recorded in the remaining 5%. The majority of the improvement was seen in domain 3, which represents client–provider interaction. In this domain 70% of facilities recorded an improvement between rounds with 5% showing no change and 24% showing a decline. In domains 1 and 2, which represent accessibility and access to information, 35% and 32% of facilities respectively showed an improvement in scores between rounds.

It should be noted that the majority of facilities that recorded no change between rounds (8 of the 13 facilities in domain 1 and 15 of the 17 facilities in domain 2), had scored 100% at each round and therefore in these cases there was no opportunity for improvement in those domains.

#### 3.1. Shared ownership and community empowerment


The participatory methodology gave local communities and their representatives the opportunity to know and act upon the state of MNH services in their area. Including community members in the process from the outset and displaying results in a simple visual format not only promoted accessibility and easy interpretation of results but, more importantly, promoted use of scorecard data for dissemination and as a means for MNH advocacy. Many communities took the initiative to resolve issues themselves, either by fundraising or practical action, but many also used the data to advocate to district health management or district assembly personnel for funds to fill gaps in infrastructure. In terms of disseminating the results, community representatives often used local community radios and durbars (traditional social gatherings) to raise awareness about gaps and limitations at their facility, and to advocate for more resources [15]. A DHMT member from Volta commented [15]:

*“It looks like communities never knew what to do to support healthcare delivery in their localities until the scorecard exercise.”*



















MNH councils were perceived as having been instrumental in inspiring traditional leaders to use their leadership roles to address gaps identified by scorecard results. For instance, chiefs in the Volta region


### MamaYe Scorecard Round 2 Results – March 2015 Health Centre 32, Ho Municipal, Volta Region



Overall score for Facility Infrastructure  
and Equipment assessment (24% )

88%

Facility Infrastructure and Equipment	Score	Performance rating	Change since last scorecard
 Domain 1: Accessibility and Access to Information	79%		47% 
 Domain 2: Staffing	100%		
 Domain 3: Infrastructure (Electricity & Infrastructure)	93%		22% 
 Domain 4: Water, Sanitation & Hygiene	100%		14% 
 Domain 5: Essential Equipment	82%		18% 
 Domain 6: Essential Drugs	74%		41% 

Overall score for Client Perspectives Assessment (14% )

98%

Client Perspectives	Score	Performance rating	Change since last scorecard
 Domain 1: Accessibility of facility	100%		20% 
 Domain 2: Access to information	100%		12% 
 Domain 3: Provider-client interaction	94%		9% 

Fig. 1. Scorecard example: round one and two comparative results.

built a water supply in the Wegbe health facility and others bought mobile phones for rural facilities that had no means of communication in case of an emergency [15]. In the Volta region, a chief decided to tax the catchment area inhabitants with a small fee, and used these funds to build the road leading to the health facility. The scorecards had shown that the facility was not accessible during the rainy season owing to poor road conditions.

Also emerging from the assessment data is that improvements were faster for issues with a possible locally actionable solution than for those requiring an intervention by district or regional government. Domain 1 scoring was the most improved between round 1 and 2, with gaps such as the absence of sign posting indicating location of the maternity ward and the insufficiency of benches and toilets in maternity areas; these problems were often addressed by communities themselves, for instance by churches donating benches for maternity waiting areas. Quantitative data showed a much higher availability of waiting seats for maternity clients, in 83.8% of the facilities at the second round of data collection versus 48.6% at the first round ( $n = 37$ ).

In general, community engagement and empowerment was weaker in districts where chiefs had not become engaged and taken responsibility, such as in Sekyere South, and where the link between communities and facilities had not been strengthened for example by the liaison work of MNH councils.

### 3.2. Shared ownership and health staff empowerment

Many health facility staff involved in this process mentioned it was the first time they felt supported by their community and, moreover, that they now saw value in developing this shared ownership for improving MNH services. Although some of the assessment results highlight potential deficiencies on the side of health providers (which required a solution on their part), most gaps that were identified required responses from a broad base of actors from all sectors involved. Some problems were due to other sectoral actors not fulfilling their duties, or requiring a complex systemic response. The realization that health staff were limited not only in terms of their responsibility but also in their capacity to act, given resource limits at facility level,



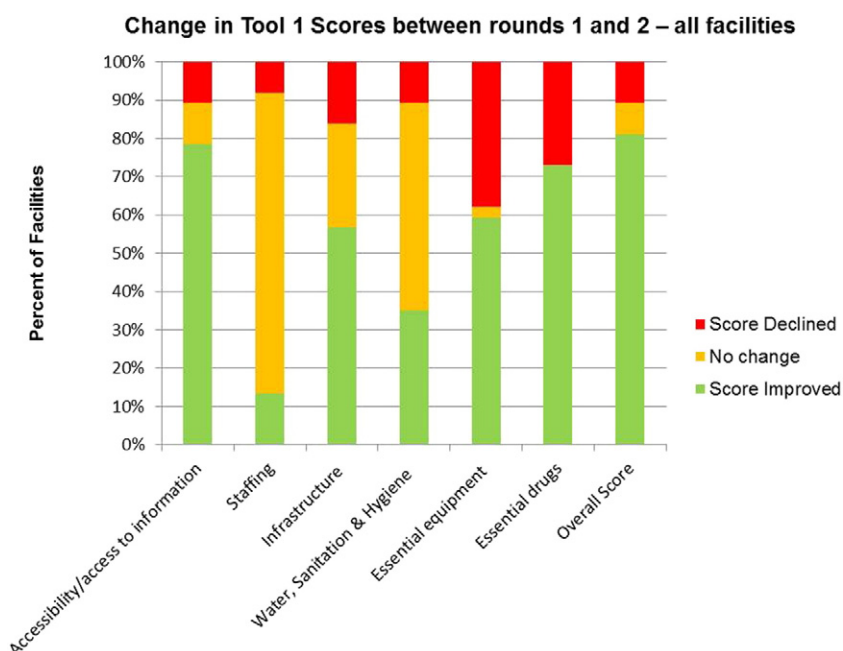


Fig. 2. Tool 1: Change between rounds 1 and 2 in overall scores by district.

and that they required coordinated support from others, was a necessary and important turning point in many of the successful results linked to this initiative. A community member from the Volta region commented [15]:

*“Now I understand why they refer people. It’s because they are not at the level where they can take care of certain problems. Previously I thought they were not ready to help us.”*

Indeed, community recognition of the difficult conditions in which many midwives work and their need for support was shown, for example, by a Queen Mother (traditional leader) in Ho Municipal (Volta region) creating a midwife award system in her district (on the basis of scorecard results) to promote midwifery and the needs of midwives in the

area. The effect of scorecards in empowering facility staff was observed in the actions of a public health nurse in the Volta region who requested essential MNH equipment from her DHMT office using the scorecard results to make her case. This nurse commented that the tangible, credible evidence provided by the scorecards gave her the confidence to approach her superiors, which she had not previously done before [15], and commented that:

*“In doing advocacy (within DHMT and RHMT, and in communities), I now have pictures of the problem to show it to everyone.”* [15]

Although the quantitative data highlighted limited evidence of improved provider–client interaction in health facilities (tool 2, domain 3)—partly because scores were already high at baseline, some aspects

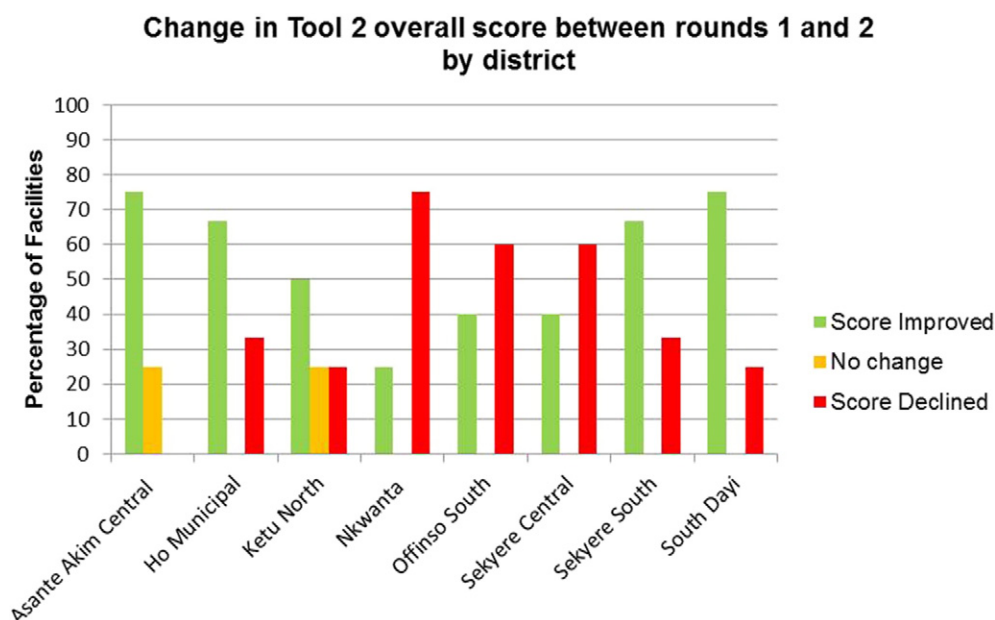


Fig. 3. Tool 2: Change between rounds 1 and 2 in overall scores by district (number of facilities).

improved across districts, such as the question “Did the provider explain the examination, procedures, or tests before they were performed?” The odds of interviewees answering “yes” were almost twice as high in the second round of data collection compared with the first round ( $n = 334$ , odds ratio 1.83).

### 3.3. Shared ownership and multisector accountability

On a day-to-day basis MNH staff tend mainly to collaborate with other health system actors and have limited interaction with or direct support from other sectors of society, especially at higher levels of decision-making. This intervention sought to address this issue by encouraging all MNH actors to interact so as to clarify and make public where responsibilities lie, what resources are available, and also who to contact to address essential gaps in service delivery. Regular interaction at district level led to better information and increased action by a broad base of actors.

Engaged stakeholders used or even created cross-sector accountability mechanisms to further MNH improvements. In Asante Akim district (Ashanti), community members created a local accountability network (LANET) that became a district level advocacy platform with reach to the national level. After a woman died in labor before reaching a health facility, the LANET network organized a community durbar to raise funds for an ambulance. The initiative then caught the attention of the district assembly. A member of this assembly commented:

*“Though the community with the support of MNH councils initiated the activity, we the assembly saw relevance in it and have been working with them.” [14]*

Having heard that the ambulance fundraising initiative succeeded in his district, a Member of Parliament (MP) decided to step in and buy an ambulance. The original funds were then set aside as a maintenance and fuel fund for the vehicle [14]. This example clearly highlights the complex dynamics of social accountability, where a community-initiated endeavor stimulated action from another sector and finally a reaction from a duty bearer with decision-making power at the national level. Indeed, between the two assessments, five facilities obtained an emergency vehicles/ambulance—either through the purchase of a new vehicle or through an improved referral system using the existing district hospital vehicle.

### 3.4. Shared ownership and multilevel accountability

Although the scorecard process focused on district level stakeholders, regional and national level health sector actors were also present and engaged during data collection and interface meetings. The results of the facility assessments were such that MNH actors at all levels were led to the realization that the poor EmONC status of many facilities was related not only to a lack of resources but also to a lack of commitment, communication, and awareness of duty-bearers’ responsibilities and rights-holders’ entitlements at many levels and this was especially the case for smaller and more remote facilities. A member of an MNH council noted:

*“I think the problem about MNH is not much about financial resources but the commitment at various levels including the communities.” [14]*

After a district level meeting that had highlighted the shortage of midwives and delivery beds in a facility of Ho Municipal (Volta region), supported by the DHMT, the facility sent a letter directly to the Regional Health Directorate to request an additional midwife and more delivery beds. A solution was duly provided: within 6 months the facility had three midwives and sufficient beds at all times. Transparency of information on gaps within facilities supported vertical

accountability, as exemplified by a statement from a district director from Ashanti [14]:

*“I know now people are looking, so if the assessment teams come again in 6 months and nothing has changed, people will know I haven’t done anything. So I have to look where we are falling short and do something about it.”*

An increase in the proportion of health facilities having access to specific essential equipment and drugs was observed for 37 out of 51 items—an indicator for effective vertical accountability. For instance, the proportion of facilities having magnesium sulfate (injection, 50% concentration) in stock increased from 37.8% in the first round to 59.5% in the second round ( $n = 37$ ); Fansidar in stock rose from 59.5% to 89.2% ( $n = 37$ ).

## 4. Discussion

With the general lack of evidence on what works when involving community representatives to improve quality of services [8–10], the present paper considered whether it is effective to actively engage multiple stakeholders at district level to improve MNH services using a social accountability approach. Through process and output data, we assessed whether engaging multiple stakeholders from government and civil society creates shared ownership and common action to improve the quality of care in MNH.

The qualitative data show marked growth in a culture of accountability at community and district level. Key components of this culture of accountability included hitherto unseen levels of community participation, greatly increased transparency between communities, facilities, and policy makers, and improved clarity and effectiveness of lines of accountability among decision-makers.

The involvement of all stakeholder groups—from the design and data collection stages to the dissemination of results and the attribution of responsibilities—contributed to a strong sense of shared ownership for the state of MNH services in the intervention districts and had many effects. Presented results in a scorecard format were shown to be an effective vehicle for improving community engagement, since ownership of the results by all stakeholders was critical. Strong leadership at district and community level—including through MNH councils—was also shown to be key both in terms of engaging with regional and national government and in creating a positive dynamic between health facility staff, district assemblies, and communities. Findings also show that public acknowledgment of this shared ownership for MNH services also empowered many health staff in their role as important community stakeholders and as advocates at both local and regional level. There was improved client–provider relations because clients better understood limitations of their facilities and, because of that understanding, staff were motivated and better supported by communities to improve facilities.

Horizontal accountability—that is, shared ownership across stakeholders and sectors—was increased at district level through the transparency of the process and notably through public dialogue at meetings. These meetings were often the first time such a diverse set of actors had come together to discuss MNH services and to assign responsibilities for their improvement. However, the level of engagement in these discussions and action on agreed responsibilities was often dependent on the strength of leadership at district government level. Vertical accountability—that is, when public officials are held accountable for policy and political commitments—was successful in instances when engaged stakeholders felt empowered to make demands to the district or regional level, from whence such demands could also be escalated to national level. However, this form of accountability was shown to be more difficult to attain even on a case-by-case basis; given that this is the form of accountability that can ultimately yield the most sustainable and far reaching effects, the present study

highlighted the considerable challenge of truly influencing systemic change.

In terms of quantitative results, improvements were seen across many areas including the accessibility of maternity wards, availability of essential drugs and equipment, and infrastructure improvements. Although staffing, water, sanitation, and client care did improve between the two assessment rounds, improvements were slower and uneven within regions. These uneven results were mainly seen to be related to the following issues [15,16]:

- Expectations from, and actions carried out by different stakeholder groups were not always aligned. Community members tended to implement their action plan commitments and responsibilities at a quicker pace than district and regional officials. Thus, horizontal accountability seemed to occur more often than vertical accountability, which required more time and strategic engagement.
- Districts and communities with weaker leadership tended to have weaker engagement in the entire process.
- While there was willingness to act on the part of some facilities or districts, their capacity to do so was often severely limited by resource constraints stemming from systemic problems that require systemic solutions well beyond the control of actors at local level. One prime, and common, instance of such problems was the delay in reimbursement of costs for essential drugs by the National Health Insurance Authority (NHIA) leaving district and regional budgets continually in deficit.

In terms of future scale-up, it is useful to note some limitations and lessons learned that emerged during the piloting of this intervention. First, external financial and technical inputs were needed to set up and moderate the process as well as to analyze scorecard data, thus limiting the self-sustaining nature of this particular model. However, no external funds were used to resolve issues identified in the scorecard process. Second, using a social accountability approach is less predictable than more “top down” models in terms of effects that are generated. There is also a risk that activity and results that arise from such participation may not be in line with local, regional, or national government goals or strategies. Finally, community-driven action is inevitably limited in terms of its reach and financial power: interventions such as scorecards need to foster not only the willingness and capacity of community members and health professionals to take local action, but also to press for accountability from duty bearers. Whilst “do it yourself” facility improvements that arise out of horizontal community accountability are a quick easy win, they do not strengthen systems of accountability that can help ensure long term, sustainable improvements [15]. Hence, it is important for social accountability interventions to foster both the sense of commitment to do what is possible without resources, as well as a more zealous attitude to advocating for a better distribution of resources at district or regional level. However, even the strengthening of local systems of accountability cannot bring about the kinds of increases in resources or improved management of resources—for example in the drugs reimbursement system in Ghana—that are needed to create conditions in which quality of care improvements, related, for example, to ongoing high-quality staff training, to provision of consistently adequate staff numbers, or to provision of major infrastructure improvements such as operating theaters, can be achieved. Hence, the quantitative impact of social accountability interventions on quality of care is inevitably limited.

## 5. Conclusion

Social accountability initiatives that engage a broad network of stakeholders to support MNH services have great potential if implemented in ways that are context-appropriate and are built around full collaboration with government and civil society stakeholders. In Ghana, the learning from this pilot could be used further to strengthen

government processes that engage multiple sectors, including civil society groups. Future interventions and research should aim to understand what factors promote the integration and sustainability of functional social accountability processes aimed at improving the quality and utilization of services, and how the impact of these complex interventions at the interface between civil society and government can best be measured.

## Author contributions

CBL, NS, CBA, YI, SD, SB, and SC designed and planned the paper; CBL wrote and managed the manuscript; CBL, NS, CBA, YI, SD, SB, FG, and SC contributed sections of the manuscript; CBL, CBA, FG, and SC conducted data analysis.

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## Conflict of interest

The following authors worked in the implementation of the E4A program in Ghana: Carolyn Blake as Technical Advisor; Nii Ankonu Annorbah-Sarpei as Advocacy Coordinator; Claire Bailey as Research Advisor; Yakubu Ismaila as mHealth Advisor; Sam Bosomprah as Evidence Associate; and Sylvia Deganus as MNH Technical Advisor. Sarah Clark and Francesco Galli were external researchers to the program.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://dx.doi.org/10.1016/j.ijgo.2016.10.004>.

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